

Claims

1. A process for purifying a phosphodiesterase 1 (PDE-1) from a cell including heating an extract of a cell formed from a solution including at least one divalent cation, to increase the specific activity of PDE-1 in the extract.
- 5 2. A process according to claim 1 wherein the divalent cation is magnesium or calcium.
3. A process according to claim 1 wherein the divalent cation is magnesium and calcium.
4. A process according to claim 1 wherein the concentration of the divalent
10 cation is less than 100mM.
5. A process according to claim 4 wherein the concentration of the divalent cation is about 10 to 50 mM.
6. A process according to claim 5 wherein the concentration of the divalent cation is about 50 mM.
- 15 7. A process according to claim 1 wherein the extract is heated to a temperature that permits depletion of phosphomonoesterase activity from the extract.
8. A process according to claim 7 wherein the extract is heated to less than 80°C.
9. A process according to claim 8 wherein the extract is heated to between
20 about 45 and 75°C.
10. A process according to claim 9 wherein the extract is heated to about 60°C.
11. A process for purifying PDE-1 from a barley cell including:
 releasing PDE-1 from the cell into a solution including calcium and magnesium to
25 form an extract; and
 heating the extract to increase the specific activity of PDE-1 in the extract.

12. A process according to claim 11 wherein the extract is maintained in conditions for promoting solubilisation of the phosphodiesterase in the extract prior to heating the extract.

5 13. A process according to claim 12 wherein the extract is maintained at less than 10°C.

14. A process according to claim 13 wherein the extract is maintained at between 0 to about 4°C.

15. A process according to claim 11 comprising the further step of:
utilising chromatography to purify PDE-1 from the heated extract.

10 16. A process according to claim 15 wherein anion exchange chromatography is utilised to purify PDE-1 from the heated extract.

17. A PDE-1 purified by a process according to any one of the preceding claims.

18. A cell including PDE-1 according to claim 17.

15 19. A process for producing a ribonucleotide including contacting a polyribonucleotide with a PDE-1 according to claim 17 to produce the ribonucleotide.

20. A ribonucleotide produced by a process according to claim 19.